

**Amendment to the Claims:**

This listing of claims will replace all prior versions, and listings of claims in the application:

**Listing of Claims:**

Claims 1-78 (canceled)

1                   Claim 79 (previously presented): The method of Claim 89 wherein the receptor  
2 is bound to the substrate.

1                   Claim 80 (previously presented): The method of Claim 89 wherein the ligand is  
2 bound to the substrate.

1                   Claim 81 (previously presented): The method of Claim 89 wherein the receptor  
2 is a cell surface receptor.

1                   Claim 82 (previously presented): The method of Claim 89 wherein the receptor  
2 is an intracellular receptor.

1                   Claim 83 (previously presented): The method of Claim 89 wherein the receptor  
2 is a hormone receptor.

1                   Claim 84 (previously presented): The method of Claim 79 wherein the receptor  
2 is comprised within a cell membrane.

1                   Claim 85 (previously presented): The method of Claim 89 wherein the receptor  
2 or the ligand docked to the substrate is docked to the substrate through a linker.

Claim 86-88 (canceled)

1                   Claim 87 (previously presented): The method of Claim 89 wherein the agent is a  
2 small organic molecule having a size up to about 5000 daltons.

Claim 88 (canceled)

1                   Claim 89 (previously presented): A method for determining whether an agent  
2 modulates binding between a receptor/ligand pair that specifically bind to each other, the method  
3 comprising the steps of:

4                   a) providing a mass spectrometry probe, the probe comprising a substrate having  
5 a surface and a receptor or ligand of said receptor/ligand pair docked to a surface of the substrate  
6 through an adsorbent;

7                   b) exposing the receptor or the ligand docked to the substrate to its binding  
8 partner and to said agent under an elution conditions that allows for binding between the receptor  
9 and the ligand;

10                  c) removing unbound binding partner from the surface of the substrate;

11                  d) measuring the amount of binding partner retained on the docked receptor or  
12 ligand in the presence and absence of the agent by laser desorption mass spectrometry of any  
13 retained binding partner from the surface of the substrate; and

14                  e) determining whether the agent modulates binding by comparing the measured  
15 amount of binding between the receptor and the ligand in the presence and absence of the agent  
16 whereby a difference between the measured amount of binding between the receptor and ligand  
17 in the presence and absence of the agent indicates that the agent modulates binding between the  
18 receptor/ligand pair.

Claim 90-94 (canceled)

1                   Claim 91 (previously presented): The method of Claim 85, wherein the linker is  
2 a bifunctional linker.

1                   Claim 92 (previously presented): The method of Claim 89 wherein said agent  
2 inhibits binding between said receptor/ligand pair.

Claims 93-98 (canceled)